

Eureka Math *A Story of Units*

Third Grade – Module 5

2015-2016

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Assessment based on Version 3. (No changes from Version 2 to Version 3)



Purpose of Assessments

Mid-Module Assessment: These tasks address approximately the **first half** of the module's learning objectives, and provide important information for instruction and for grading.

End-of-Module Assessment: These tasks are based on all standards addressed in order to gauge students' full range of understanding of the **module as a whole**. The End-of-Module assessment should carry more weight than the Mid-Module Assessment in terms of student grades in the appropriate domain.

Administration of Assessments

- Mid- and End-of-Module Assessments are designed to be completed in approximately one class period. However, The tests can be given over multiple days as needed.
- Assessments are designed to be completed independently by students, without assistance.
- These tasks should not be preceded by review of similar problems.

Grading Guidance

The grading scale on Elementary Report Cards has been changed for 2015-2016 and beyond. Please note that ***4 now indicates advanced understanding of grade level standards expected at this time of year.***

- 4 – Advanced:** Student demonstrates advanced understanding of grade level standards expected at this time of year.
- 3 – Proficient:** Student demonstrates proficiency with grade level standards expected at this time of year.
- 2 – Basic:** Student demonstrates basic understanding of grade level standards expected at this time of year. Student needs additional support and practice.
- 1 – Below Basic:** Student demonstrates minimal understanding of grade level standards expected at this time of year. Student needs significant support and practice.

Rubrics and Checklists have been updated to reflect this change. Rubrics have been further modified from Eureka Math originals for clarity, accuracy, and alignment to Bethel's grade scale.

General Grading Guidance:

- On the report card, student learning is reported by CCSS domain. The Third Grade CCSS domains are: Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations – Fractions, Measurement and Data, and Geometry.
- Grades in each domain should be based on multiple sources of evidence, including the Mid- and End-of-Module Assessments. The End-of-Module assessment should carry more weight than the Mid-Module Assessment in terms of student grades in the appropriate domain.

Module 5 Grading Guidance:

- The standards assessed in Module 5 will not be assessed again. (See checklist on page 3.)

Grade 3 Common Core State Standards Checklist by Module

This grade-level chart provides an at-a-glance view of when each standard is addressed. **Shaded boxes indicate standards that are first assessed in Module 5.** *Note that standards included in major clusters are followed by an asterisk (*).* Please refer to the Curriculum Overview of *A Story of Units* for a curriculum map and detailed grade-level descriptions including a summary of the year, a rationale of the module sequence, and a standards alignment chart.

CCSS		GRADE 3 MODULES						
		1	2	3	4	5	6	7
3.OA	1*	X						
	2*	X						
	3*	X		X				
	4*	X		X				
	5*	X		X				
	6*	X						
	7*	X	X	X				
	8*	X		X				
	9*			X				
3.NBT	1		X					
	2		X					
	3			X				
3.NF	1*					X		
	2a*					X		
	2b*					X		
	3a*					X		
	3b*					X		
	3c*					X		
	3d*					X		
3.MD	1*		X					
	2*		X					
	3						X	
	4						X	X
	5a*				X			
	5b*				X			
	6*				X			
	7a*				X			
	7b*				X			
	7c*				X			
	7d*				X			
	8							X
3.G	1							X
	2					X		

Third Grade Module 5: Mid-Module Assessment Task Score Sheet

A Progression of Learning

A Progression of Learning is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency*. In this chart, this progress is presented from left to right. The learning goal for each student is to move to the last step, “Evidence of solid reasoning with a correct answer”. These steps are meant to help teachers and students identify and celebrate what the student **CAN** do now, and what they need to work on next.

Score Key: A Progression of Learning

Little or no evidence of reasoning with an incorrect answer. (1 Point)	Evidence of some reasoning with an incorrect answer. (2 Points)	Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer. (3 Points)	Evidence of solid reasoning with a correct answer. (4 Points)
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Module 5: Mid-Module Assessment							
Question	Domain			Standards			
	Number and Operations - Fractions			Geometry	3.NF.1	3.NF.3c	3.NF.3d 3.G.2
1	1	2	3	4	X		
2a				1	2	3	X
2b	1	2	3			X	
3	1	2	3	4			X
4	1	2	3	4	X		X

Domain Score	Number and Operations - Fractions		Geometry	
Total Points				
Level	4	14-15 pts.	4	11 pts.
	3	10-13 pts.	3	8-10 pts.
	2	6-9 pts.	2	5-7 pts.
	1	4-5 pts.	1	3-4 pts.

Note: For more information about standards assessed in this module, see back of this score sheet.

Notes:

Third Grade Module 5: Mid-Module Assessment Task Score Sheet (continued)

Mid-Module Assessment Task (Topics A–C) Clusters and Standards Addressed

Develop understanding of fractions as numbers.

- 3.NF.1** Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.
- 3.NF.3** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
- c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line.*
 - d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.

Reason with shapes and their attributes.

- 3.G.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as $1/4$ of the area of the shape.*

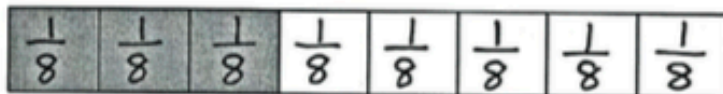
Third Grade Module 5: Mid-Module Assessment Task Rubric

A Progression of Learning				
Assessment Task Item and Standards Assessed	STEP 1 Little or no evidence of reasoning with an incorrect answer. (1 Point)	STEP 2 Evidence of some reasoning with an incorrect answer. (2 Points)	STEP 3 Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer. (3 Points)	STEP 4 Evidence of solid reasoning with a correct answer. (4 Points)
1 3.NF.1	The student correctly answers 0-1 of the four parts.	The student correctly answers 2 of the four parts.	The student correctly answers 3 of the four parts.	The student correctly answers all 4 parts. (See below.)
	a. (1) Identifies how many parts the whole is divided into—8. b. (2) Labels each unit fraction as $\frac{1}{8}$. c. (3) Identifies the fraction shaded— $\frac{3}{8}$. d. (4) Identifies the fraction not shaded— $\frac{5}{8}$.			
2a 3.G.2 See below for NF scoring for 2b.	The student correctly answers 0-1 of the three parts.	The student correctly answers 2 of the three parts.	The student correctly answers 3 of the three parts.	No level 4 available for this item.
	(1) Shows 2 rectangles divided into thirds (2) Shades a fraction greater than one ($\frac{3}{3}$) (3) Labels the shaded fraction			
2b 3.NF.3c See above for Geometry scoring for 2a	The student is unable to draw a number bond that shows 1 whole rectangle as 3 unit fractions.	The student writes a number bond with the whole as 1 or $\frac{3}{3}$, but shows parts that are not unit fractions.	The student writes a number bond with the whole as 1 or $\frac{3}{3}$, and $\frac{1}{3}$, $\frac{1}{3}$, and $\frac{1}{3}$ as the parts.	No level 4 available for this item.
3 3.NF.3d & 3.G.2 Use this rubric to double score #3 (use the same rubric for NF and G scores)	The student's work shows little or no evidence of being able to partition the cakes into fractional units to make sense of the problem.	The student incorrectly states that Mrs. Ramirez bought the larger piece, but explanation is unclear.	The student states that Mr. Chu bought the larger piece of cake using words, pictures, OR numbers.	The student clearly explains that Mr. Chu bought the larger piece of cake using words, pictures, AND numbers.
4 3.NF.1 3.NF.3d 3.G.2 Use this rubric to double score #4 (use the same rubric for NF and G scores)	The student is unable to correctly answer any part.	The student correctly answers 1 of the three parts.	The student correctly answers 2 of the three parts.	The student correctly answers all 3 parts. (See below.)
	a. Uses words, pictures, and/or numbers to explain how the picture can be interpreted two ways: (1) As 4 halves with $\frac{3}{2}$ shaded, the whole being defined by the middle line of the strip and (2) as 4 fourths with $\frac{3}{4}$ shaded, with the whole being defined by the entire strip. b. (3) Uses word, pictures, and/or numbers to explain that Natalie is not correct because the whole is different for each fractional unit.			

Third Grade Module 5: Mid-Module Assessment Task Key

Name Gina

Date _____



1. Natalie folded 1 whole fraction strip as pictured above.

a. How many equal parts did she divide the whole into? 8 equal parts

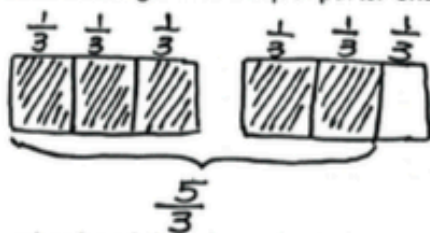
b. Label each equal part with a unit fraction.

c. Identify the fraction of the strip she shaded. $\frac{3}{8}$

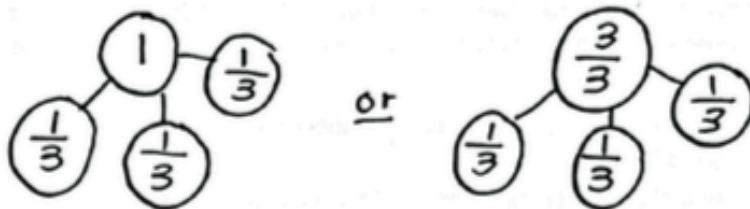
d. Identify the fraction of the strip she did not shade. $\frac{5}{8}$

2. Draw 2 rectangles the same size. Each rectangle represents 1 whole.

a. Partition each rectangle into 3 equal parts. Shade and label a fraction greater than 1.



b. Draw a number bond that shows 1 whole rectangle as 3 unit fractions.



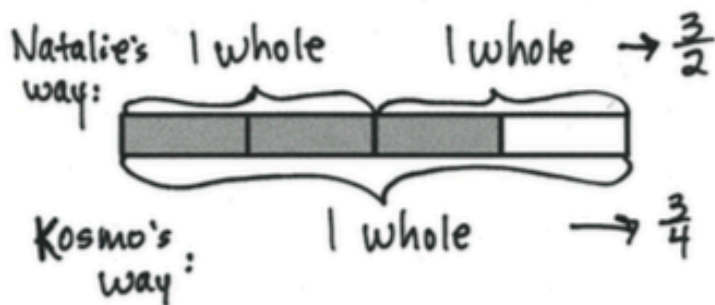
Third Grade Module 5: Mid-Module Assessment Task Key (continued)

3. The bakery had a chocolate cake and a vanilla cake that were exactly the same size. Mr. Chu bought $\frac{1}{4}$ of the chocolate cake. Mrs. Ramirez bought $\frac{1}{6}$ of the vanilla cake. Who bought a larger piece of cake? Explain your answer using words, pictures, and numbers.



Mr. Chu bought a larger piece of cake because $\frac{1}{4} > \frac{1}{6}$. Fourths have fewer equal parts, so each piece is bigger.

4. Natalie explained, "My drawing shows a picture of $\frac{3}{2}$." Kosmo says, "It looks like a picture of $\frac{3}{4}$ to me."
- a. Show and explain how they could both be correct by choosing different wholes. Use words, pictures, and numbers.



They can both be right. It depends on the whole and they don't know what it is.

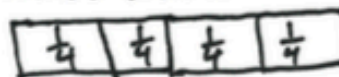
- b. Natalie said to Kosmo, "One part can represent either 1 half or 1 fourth. That must mean $\frac{1}{2} = \frac{1}{4}$." Do you agree with Natalie? Use words, pictures, and numbers to explain your reasoning.

Natalie is wrong because the wholes are not the same size. The wholes have to be the same size to compare fractions.

Natalie's whole:



Kosmo's whole:



Third Grade Module 5: End-of-Module Assessment Task Score Sheet**A Progression of Learning**

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Score Key: A Progression of Learning

Little or no evidence of reasoning with an incorrect answer.	Evidence of some reasoning with an incorrect answer.	Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.	Evidence of solid reasoning with a correct answer.
(1 Point)	(2 Points)	(3 Points)	(4 Points)

Module 5: End-of-Module Assessment									
Question	Domain			Standards					
	Number and Operations - Fractions			Geometry					
1	1	2	3	4					
2	1	2	3	4	1	2	3	4	
3	1	2	3	4					
4	1	2	3	4					

Domain Score	Number and Operations - Fractions		Geometry	
Total Points				
Level	4	14-16 pts.	4	4 points
	3	10-13 pts.	3	3 points
	2	6-9 pts.	2	2 points
	1	4-5 pts.	1	1 points

Note: For more information about standards assessed in this module, see back of this score sheet.

Notes:

Third Grade Module 5: End-of-Module Assessment Task Score Sheet (continued)

End-of-Module Assessment Task (Topics A–F) Standards Addressed

Develop understanding of fractions as numbers.

- 3.NF.1** Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.
- 3.NF.2** Understand a fraction as a number on the number line; represent fractions on a number line diagram.
- Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.
 - Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.
- 3.NF.3** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
- Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
 - Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual fraction model.
 - Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line.*
 - Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.

Reason with shapes and their attributes.

- 3.G.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as $1/4$ of the area of the shape.*

Third Grade Module 5: End-of-Module Assessment Task Rubric

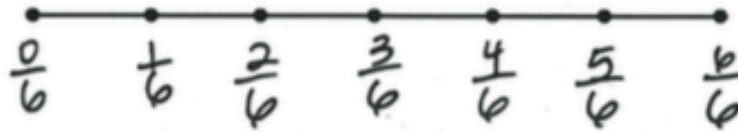
A Progression of Learning				
Assessment Task Item and Standards Assessed	STEP 1 Little or no evidence of reasoning with an incorrect answer. (1 Point)	STEP 2 Evidence of some reasoning with an incorrect answer. (2 Points)	STEP 3 Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer. (3 Points)	STEP 4 Evidence of solid reasoning with a correct answer. (4 Points)
1 3.NF.2a 3.NF.3a	The student correctly answers 0 of the three parts.	The student correctly answers 1 of the three parts.	The student correctly answers 2 of the three parts.	The student correctly answers 3 of the three parts. (See below.)
	a. (1) Labels the number line with sixths. b. (2) Identifies $\frac{3}{6}$ (or equivalent fraction) as the halfway point for Betsy's coat. c. (3) Writes any fraction equivalent to $\frac{3}{6}$, such as $\frac{1}{2}$.			
2 3.NF.3b 3.G.2 3.NF.1 Use this rubric to double score #2 (use the same rubric for NF and G scores)	The student does not demonstrate any understanding of finding equivalent fractions.	The student explains how Jerry would find an equivalent fraction, using only 1 method, or explanation is unclear.	The student explains how Jerry would find an equivalent fraction, using only 2 methods (words, numbers, pictures).	The student explains how Jerry would find an equivalent fraction using words, pictures, AND numbers. (For example, draws smaller equal parts on the diagram, shows a fraction equal to $\frac{2}{3}$, etc.)
3 3.NF.3d 3.NF.1	The student correctly answers 0-1 out of the four parts.	The student correctly answers 2 out of the four parts.	The student correctly answers 3 out of the four parts.	The student correctly answers 4 out of the four parts. (See below.)
	(1) Jerry has eaten more of his granola bars (2) Explains that $\frac{3}{6} > \frac{3}{8}$ using words, (3) pictures, and (4) numbers			
4 3.NF.2a, b 3.NF.3a, b, c, d 3.NF.1	The student correctly answers 0 of the three parts.	The student correctly answers 1 of the three parts.	The student correctly answers 2 of the three parts.	The student correctly answers 3 of the three parts. (See below.)
	a. (1) Shows all of the fractions from $\frac{0}{3}$ up to $\frac{12}{3}$ numerically, including renaming the wholes. b. (2) Explains $\frac{1}{4}$ or $\frac{3}{12}$ of the whole roll was eaten using words, pictures, and/or numbers. c. (3) Uses words, pictures, and/or numbers to explain that $\frac{1}{3}$ is equal to $\frac{2}{6}$.			

Third Grade Module 5: End-of-Module Assessment Task Key

Name Gina Date _____

1. Jerry put 7 equally spaced hooks on a straight wire so students could hang up their coats. The whole length is from the first hook to the last hook.

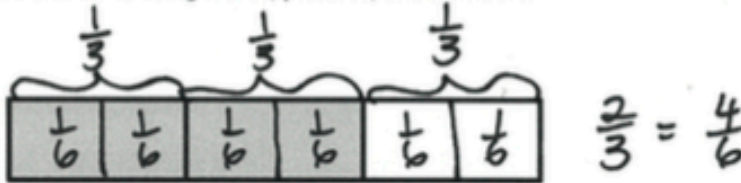
a. On the picture below, label the fraction of the wire's length where each hook is located.



b. At what fraction is Betsy's coat if she hangs it at the halfway point? $\frac{3}{6}$

c. Write a fraction that is equivalent to your answer for Part (b). $\frac{1}{2}$

2. Jerry used the picture below to show his son how to find a fraction equal to $\frac{2}{3}$. Explain what Jerry might have said and done using words, pictures, and numbers.




I made each $\frac{1}{3}$ into 2 smaller, equal parts. So then it wasn't just thirds anymore, it was sixths too! I can see from the shading that $\frac{2}{3}$ is the same as $\frac{4}{6}$.

Third Grade Module 5: End-of-Module Assessment Task Key (continued)

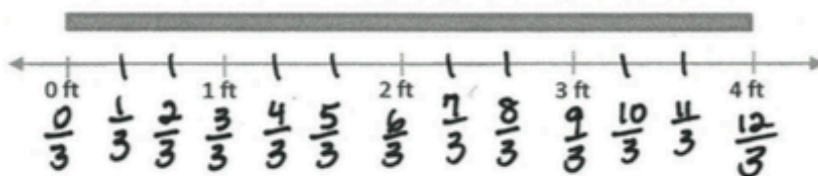
3. Jerry and his son have the exact same granola bars. Jerry has eaten $\frac{3}{6}$ of his granola bar. His son has eaten $\frac{3}{8}$ of his. Who has eaten more? Explain your answer using words, pictures, and numbers.

Jerry  $\frac{3}{6}$ $\frac{3}{6} > \frac{3}{8}$

Son  $\frac{3}{8}$ Jerry ate more because his pieces are bigger than his son's pieces and they ate the same number of pieces.

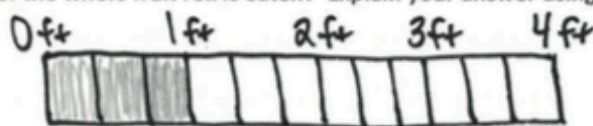
4. Jerry has a fruit roll that is 4 feet long.

- a. Label the number line to show how Jerry might cut his fruit roll into pieces $\frac{1}{3}$ of a foot long. Label every fraction on the number line, including renaming the wholes.



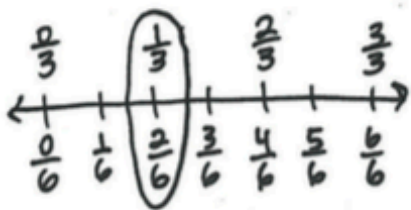
- b. Jerry cut his fruit roll into pieces that are $\frac{1}{3}$ of a foot long. Jerry and his 2 sons each eat one piece.

What fraction of the whole fruit roll is eaten? Explain your answer using words, pictures, and numbers.



$\frac{1}{4}$ of the whole roll was eaten because together they ate 1 of the 4 feet. Or, you can say $\frac{3}{12}$ was eaten because there are 12 pieces and they ate 3 pieces.

- c. Jerry's son says that 1 third is the same as 2 sixths. Do you agree? Why or why not? Use words, pictures, and numbers to explain your answer.



Yes, I agree. When I draw a number line with thirds and sixths, $\frac{1}{3}$ and $\frac{2}{6}$ are at the same point. That means they're equal!